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NAVAL WAR COLLEGE
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IN SEARCH FOR LEVERAGE: DAVID VERSUS GOLIATH IN 1967

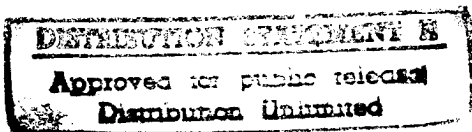
by

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A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Joint Military Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.



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Abstract of
IN SEARCH FOR LEVERAGE: DAVID VERSUS GOLIATH IN 1967

This paper examines the Israeli Air Force (IAF) operational art employed during the 1967 Arab-Israeli Six-Day War. Its purpose is to create a blueprint of valuable lessons to guide our nation's future force employment. To set the stage, a short historical compendium of the political environment leading up to the conflict, followed by a summary of the IAF air operation is provided. Given this background, the scope of the operational art analysis is limited to examining the IAF's primary operational objective of establishing air superiority during the first two days of the war.

The analytical method to derive major lessons learned will be to sift the elements of operational art employed by the IAF air operation against a screen of the nine enduring principles of war: Objective, Offensive, Mass, Economy of Force, Maneuver, Unity of Command, Simplicity, Security, and Surprise. This analytical framework revealed a golden 'trinity of truths' employed by the Israelis that successfully unlocked the effective and efficient application of their limited force: sound planning, quality leadership and expert implementation.

The lesson for our dwindling forces today, is that this golden 'trinity of truths' must exist in balance, grounded in the foundation of the principles of war. For only then, does an outgunned, outmanned and surrounded force have the capacity to produce the leverage necessary to achieve victory.

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I. Introduction

Correct theories, founded upon the right principles, sustained by actual events of wars, and added to accurate military history, will form a true school of instruction for generals.¹

-Baron Antoine-Henri de Jomini

Just as a shepherd in Old Testament times miraculously saved the nation of Israel from defeat with a single slingshot throw, a similar twentieth-century miracle occurred during the Arab-Israeli Six-Day War of 1967. Yet, to decipher key lessons learned requires a familiarity of Israeli military history. Therefore, before analyzing the operational art employed by Israel Air Force (IAF), a historical refresher of the political situation leading up to the Six-Day War, followed by a recap of the first two days of the IAF air operation is presented. With this as background, an analysis of the successful operational art employed by the IAF commences. The process employed uses the principles of war as a sieve to filter out essential golden ‘truths’ that our future forces can utilize as leverage to efficiently, effectively and decisively achieve operational success.

II. Background: David versus Goliath in 1967

Goliath: The Arab Prewar Perspective

We want a policy of scorched earth for Palestine . . . a people's war of resistance, sabotage, and terror.²

-Nureddin al-Atassi (President of Syria)

Wars are not conceived in isolation, and in this war, it took *three* major events to bring the nation of Israel to blows. The Syrians, seeking the destruction of Israel, started the escalation process by attacking Israel both verbally and physically.³ The fatal sequence leading to the eventual war began on 7 April 1967 when the Syrians attacked Israeli farmers in the Galilee area.⁴ This incident sparked an aerial engagement resulting in the downing of six Syrian MiGs.⁵ In the Arab world, the response to Syria's humiliation ranged from open derision in Jordan to embarrassed silence from a crucial Syrian ally, the President of Egypt, Gamal Abdel Nasser.⁶

Though the air encounter had not been expensive in lives, the victory of the Mirage over the MiG irritated Moscow. With Moscow's support, the Syrian infiltrations and attacks grew in intensity, which served only to aggravate the situation further.⁷ The Soviets, in an attempt to reduce the threat of Israel attacking Syria (which was on the verge of becoming the first Arab

communist state), invited an Egyptian parliamentary delegation to Moscow on 12 May 1967.⁸ Seeking to manipulate the Egyptians into supporting the Syrian appeal for help, the Egyptian delegation was told (based upon phoney intelligence reports), to expect an Israeli invasion of Syria immediately after the Israeli 15 May 1967 Independence Day celebration.⁹

Nasser could not afford to stand idly by as his prestige as leader of the Arab world, and of its single most powerful nation, was at stake.¹⁰ Therefore, on 15 May 1967, while the Israelis were celebrating the nineteenth anniversary of their Declaration of Independence, he ordered the Egyptian Commander-in-Chief, Field Marshal Amer, to move three division and 600 tanks into the Sinai.¹¹ Egypt's initial political objective was to advance eastward to the Israeli border to draw Israeli attention from their Syrian ally through gestures of belligerence. However, to be convincing, Egypt chose the military objective of blockading the Strait of Tiran.

EVENT #1
Removal of
UNEF

As a result, the *first* major event worthy of Israeli attention occurred shortly afterwards when Nasser ordered the removal of the U.N. Emergency Forces, stationed since 1957 on Egyptian soil, in the Gaza Strip and near the Strait of Tiran.¹² On 18 May 1967, complying with the Egyptian request, U.N. Secretary-General U Thant removed the only safety valve that had prevented a Middle East explosion for more than ten years.¹³ Nasser's diversionary plan worked. For Israel, unsure of his intentions, now saw Egypt as the threat.

EVENT #2
Closure of
Gulf of Aqaba

The *second* major event occurred on 23 May 1967 when Nasser announced the closure of the Gulf of Aqaba and Strait of Tiran to Israeli shipping and all other vessels bound for Israel with strategic material aboard.¹⁴ This move effectively closed Israel's critical sea line of communication and only southern port, Eilat, which represented their strategic gateway to Africa and Asia.¹⁵ Showing self-restraint, the Israeli's sole response to Egypt was to make it clear that the blockade of the Strait of Tiran was considered an act of aggression.¹⁶

Riding on a bow wave of accomplishments, and not sensing any strong world or Israeli opposition, on 26 May 1967, Nasser gave a speech in which he declared the new desired political aim of Egypt "was to destroy Israel."¹⁷ This Arab war cry was strong enough that even King Hussein of Jordan, archenemy of both Egypt and Syria, was stirred to swallow his pride and fly to

Cairo on 30 May 1967 to sign a mutual defense pact with Nasser.¹⁸ This defense pact effectively placed Hussein's troops under Egyptian command in the event of hostilities.¹⁹ Following the Jordanian lead, and in quick succession, Arab unity materialized as Iraq, Morocco, Tunisia, Kuwait, Yemen, Algeria and Saudi Arabia joined the Arab alliance.²⁰ The Arab blood was boiling with revenge as they believed every Arab who did not participate in this conflict would seal his future fate.²¹ Now, Goliath was an alliance of many nations that not only blockaded Israel, but had the proverbial David surrounded on all sides (see appendix A).²²

David: The Israel Prewar Perspective

Israel was not standing idly by, and on 20 May 1967 Prime Minister Levi Eshkol ordered a general mobilization that was completed by 23 May 1967.²³ Understandably, the most impatient to see action was the IAF, which was in total readiness, and could be easily re-targeted from Syria to the southwest. In contrast, the Israeli army, encumbered by the factors of space and time, faced the logistic burden of moving from the Syrian and Jordanian fronts to the Egyptian frontier.²⁴

EVENT #3
Jordan/Egyptian
Reconciliation

The reconciliation of Jordan with Egypt on 30 May 1967 was the *third* and decisive event that ultimately spurred the Israelis into action.²⁵ Israel quickly realized the problem now for the Arab countries was not whether they should blockade the port of Eilat, or how to blockade it—but how to go about totally exterminating the State of Israel.²⁶

Under pressure from members of the Knesset (Israeli parliament) and public opinion, Eshkol agreed on 1 June 1967 to appoint Moshe Dayan as Minister of Defense—a position that Eshkol had been holding.²⁷ Major General Mordechai Hod, the IAF commander and architect of the air operation, was directed by the Chief of Staff, Lieutenant General Yitzchak Rabin, to brief Dayan on the preemptive air strike doctrine considered essential to avoid a war of attrition and achieve a quick, decisive Israeli victory.²⁸ Rabin knew that to win the war, it would have to be won in two days or less before international pressure forced a cease fire.²⁹ Yet, to avoid alienating world opinion (as in the 1956 war), the nation of Israel adopted a political doctrine that allowed the enemy to mobilize and proclaim to the world that this time they would annihilate the Jews.³⁰ Then, without warning, Israel would strike out at the enemy with an 'anticipatory counteroffensive' at the

last possible moment.³¹ At the Ministerial Defense Committee meeting in Jerusalem on Sunday, 4 June 1967, Dayan urged that Israel should attack at once:

I believed they [the Egyptians] were anxious to get in the first blow. If they thought that our intention too, they would not hesitate to beat us to it and launch their attack the day before we did. If they succeeded, the implications for us would be the loss of our advantage of surprise . . . we all confidently proclaimed we would win Put bluntly, I said, our best chance of victory was to strike the first blow.³²

Israeli Air Operation Summary

On the eve of war only one nation in the world, Israel, was aware of what was to occur the next morning. Israel knew the Arab alliance, though posturing, would only need a short amount of time to prepare for war. For Israel, the decision to go to war and beat the Arab alliance to the punch was formally approved by the Knesset at 3:00 P.M. on 4 June 1967.³³

To carry out their strategy, the Israelis needed to leverage the elements of surprise, near-perfect intelligence and operational precision to the maximum extent. On 5 June 1967, after they had skillfully lulled all but the keenest observers into thinking that the crisis had passed, the IAF struck.³⁴ Brigadier General Mordechai Hod, commander of the IAF, radioed the attack order at 7:10 A.M. Israeli time.³⁵ At this time Israeli Mirage, Mystère and Vautour combat planes launched at staggered intervals (eleven flights of two to four aircraft each) to strike eleven Egyptian airfields that intelligence reported contained the threatening MiG-21s and Tu-16s.³⁶ Flying low to avoid radar detection, the first wave of attacking Israeli aircraft struck ten Egyptian airfields almost simultaneously at 7:45 A.M. Israeli time (see appendix B).³⁷ The eleventh airfield, Fayid, was hit a few minutes later because it was still shrouded in the morning mist.³⁸

Seven more waves bore down on the Egyptian airfields, at 10-minute intervals.³⁹ The Egyptians were thus under continuous attack for eighty minutes without respite.⁴⁰ From 10:05 to 10:15 A.M. (Egyptian time) there was a 10-minute break, and then another eighty minutes of pounding by successive waves of bombers as before.⁴¹ To accomplish this feat, the Israelis used all available combat aircraft, holding back only twelve for home defense.⁴²

Due to the precise bombing and strafing of the IAF, they required only 170 minutes to achieve their first operational objective—air superiority.⁴³ In that short time the IAF had smashed Egypt's

best-equipped air bases and had turned 300 of Nasser's 340 serviceable combat planes into flaming wrecks (including all thirty of the long-range Tu-16 bombers caught on the ground at Beni Sueif and Luxor).⁴⁴ After only three hours the Egyptian Air Force, the largest in the Middle East, was in ruins.⁴⁵ By the end of the first day, the IAF revisited most of the nineteen Egyptian air bases attacked earlier in the day and destroyed all sixteen Egyptian radar installations in the Sinai.⁴⁶

Having believed the false Egyptian victory claims of the first day, Egypt's allies began probing offensives.⁴⁷ Upon completion of the first air operation objective, General Hod released Israeli planes to fulfill the secondary air operation objective of attacking Jordanian and Syrian airfields, and even the great Habbaniyah base, H-3 in western Iraq (they destroyed ten fighters at H-3).⁴⁸ During these attacks, they destroyed the entire Jordanian Air Force of twenty-one Hunter jets, and fifty Syrian MiGs—over two-thirds of the Syrian combat air force.⁴⁹ Because of Arab indecision to go to war, the IAF had quickly reached their second air operation objective as Brigadier General Hod later boasted, "We were able to deal with Syria and Jordan in twenty-five minutes."⁵⁰

Though Egypt and Syria still had some planes in service, the IAF enjoyed air supremacy from the second day onward.⁵¹ Being called in for more than one thousand sorties by Israeli ground commanders, IAF emphasis shifted to strafing strongly-held enemy positions ahead of ground assaults, interdicting the movement of enemy troops and supplies, and disrupting and destroying communications systems.⁵² A lack of Arab air cover left the Jordanian, Syrian and Egyptian armies exposed to attack on the road and in their fixed positions leading to their total defeat.⁵³

The Final Tally

The Six-Day War ended officially at 6:30 P.M. on 10 June 1967.⁵⁴ Through a devastating aerial assault, the Israelis were assured the ultimate victory. The Israelis had ample reason to be pleased with the success of their plans previously worked out and rehearsed over the Negev desert in southern Israel with the utmost care.⁵⁵ By nightfall of 6 June 1967, Israel had destroyed 416 planes, 393 on the ground (see appendix C).⁵⁶ After almost fifteen hundred sorties, the cost to Israel of inflicting this crippling blow was only twenty-six aircraft, all to antiaircraft fire.⁵⁷

III. Operational Art Analysis of the Israeli Air Operation

*The study of principles must precede their application. It is necessary in all things that principles, founded upon experience and reason, indicate the route of thought; the genius himself . . . can then use for action the time he would otherwise use in the search and discovery of the means to success.*⁵⁸

-Jean T. Rocquancourt

Presenting a historical synopsis of the IAF air operation has only served to set an analytical stage. Now, the work of sifting for the 'pearls of wisdom' as to why the Israelis succeeded begins. Emphasis will be on seeking foundational 'truths' that can unlock efficient, effective and decisive operational success for our future smaller force. The mechanism utilized to unmask these 'truths' will filter the IAF's operational art with nine enduring principles of war (see appendix D).

Objective

*There's only one principle of war and that's this. Hit the other fellow, as quick as you can, and as hard as you can, where it hurts him most, when he ain't lookin'!*⁵⁹

-Sir William Slim

Unlike the Arabs that had an unlimited strategic objective of destroying the nation of Israel, but lacked a coordinated operational plan to carry it out, the Israelis clearly possessed strategic and operational objectives built on an effective air target set. The Israeli's two *strategic* objectives were to reduce the military threat from the neighboring Arab countries (survival) and regain access to the Strait of Tiran for Israeli shipping.⁶⁰ Based on past wars, the Israeli leadership believed if they neutralized the strongest military threat in the region, the Egyptian army, the rest of the Arab alliance would fall.⁶¹ Therefore, their strategy revolved around a preemptive strike against Egypt while maintaining a defensive force against Jordan and Syria.

Israel's four *operational* objectives were: achieve air superiority; attack and secure the Sinai; secure the West Bank; and finally to attack and exploit the Golan Heights area. To achieve air superiority quickly, dictated two things: correct operational targeting and operational phasing.

Operational targeting is critical to airpower because it has the ability to hit anything, but that does not mean it is supposed to hit everything. To paralyze the military threat with their limited air assets quickly, the first phase of the Israeli air operation sought air superiority by targeting nineteen key Egyptian runways containing threatening bombers and interceptors. To accomplish this operational task the Israeli military commanders spent years planning, practicing and training the

IAF for just this sort of war with Egypt. General Hod said at a press conference given in Tel Aviv in June 1967: “For 16 years we lived with the plan, we slept with the plan, we ate with the plan. Constantly we perfected it.”⁶²

Yet, despite sound planning and an extremely high level of operational training, a chasm to operational success still remained—the IAF’s professional execution of the plan. Each pilot played a key role and knew exactly what he must do, when he must do it, and why it must be done to achieve the air operation objective.⁶³ Quality leadership boiled their complex mission down to simple orders: give the highest priority to rendering threatening Egyptian runways unusable; destroy the maximum number of MiG-21/Tu-16 aircraft possible.⁶⁴ Thus, IAF pilots were directed to make four passes over their targets consisting of one bombing run against the runway, and two or three strafing passes against the parked aircraft—all in ten minutes.⁶⁵

Lastly, the leadership properly phased the air operation to achieve the first operational objective of air superiority. Phase one—destruction of the Egyptian Air Force—was the priority. The IAF was not to be diverted from this critical operational task until completed. Only after the destruction of the highest threat air force in the region would phase two begin: destruction of the Syrian, Jordanian and Iraqi Air Forces. Finally, not until they achieved the operational objective of air superiority would the IAF be allowed to commence phase three in earnest: interdiction and close air support for the Israeli ground forces.

Offensive

*But there is another way. It is possible to increase the likelihood of success without defeating the enemy forces. I refer to operations that have **direct political repercussions** [original emphasis], that are designed in the first place to disrupt the opposing alliance, or to **paralyze it** [my emphasis]. . . . If such operations are possible it is obvious that they can greatly improve our prospects and that they can form a much shorter route to the goal than the destruction of the opposing armies.*⁶⁶

-Carl von Clausewitz

Airpower is inherently offensive and strategic in nature. However, for it to be effective, it must be controlled centrally and possess the ability to produce the desired effects necessary to accomplish the stated objectives. Israel, seeking a way to *paralyze* both the Arab alliance and world opinion, sought to exploit the offensive strengths of airpower (ubiquity, speed, range, potency and flexibility) while minimizing an inherent offensive weakness: airpower theory

outrunning current technology.

Because they acted via a preemptive attack, rather than reacted, the IAF had all the advantages afforded to those who seize the offensive. They could select the priorities, time, place and weaponry to achieve their operational objectives. The Israelis understood that airpower, used offensively, could ‘theoretically’ quickly annihilate Egyptian airfields and aircraft. Yet, if IAF theory exceeded the technology capable of executing the offensive plan, the results could be disastrous. Simply put, to be effective offensively the Israelis needed to insure that one did not outpace the other—theory and technology had to be in harmony. To ‘catch up’ with operational theory meant emphasizing two technological weapons to create the maximum offensive firepower for the destruction of runways and aircraft. The first, a technical breakthrough, was a unique bomb specifically designed for destroying runways while at high speed and low altitude.⁶⁷ The second, at the Israeli’s insistence, was a weapon optimization. For strafing aircraft they insisted on incorporating 30-mm guns into their French-built Mirages and Super Mystères to replace the original rockets.⁶⁸ These guns were so accurate that correspondents credited the devastation to a new secret weapon, because attributing the destruction to the magic of expert gunnery sounded much too simple.⁶⁹ Thus, having matched airpower theory with current technology, the Israelis generated effective offensive firepower, quickly achieved the air operational objectives, and produced the desired paralysis necessary for a quick decisive victory.

Mass

Clausewitz calls for the direct destruction of the enemy’s armed forces by attacking the center of gravity (COG).⁷⁰ He insisted on seeking the center and unrelentingly attacking it with great strength (concentration of forces).⁷¹ The Israelis correctly identified the Egyptian Army (the strongest in the region) as the operational COG, and if defeated would lead to winning the war.⁷² Outgunned, outmanned and surrounded, the Israelis also recognized that striking directly at the Egyptian operational COG would lead to a long war of attrition—something they could ill-afford. Understanding this, and combining it with Israeli intelligence describing the Arab tendency to plummet from euphoria to despair when things went wrong, the Israelis resolved to hit with all

their strength at a critical vulnerability—Egyptian airfields/aircraft.⁷³ This was a bold attempt to shift the fortunes of war immediately by concentrating massed operational fires at decisive points to destroy key enemy elements. If successful, the Egyptian's operational COG would then be vulnerable from both the air and ground.

To achieve the required principle of mass with airpower, the IAF pressed the advantage relentlessly and unhesitatingly by committing every ounce of combat airpower they could muster except the few aircraft held in reserve.⁷⁴ With this concentrated force, the IAF pushed themselves to the limits of exhaustion to generate 492 sorties in just three hours focused against 19 Egyptian air bases.⁷⁵ By flying more than one thousand sorties at the end of the first day, the IAF created the paralysis necessary to lead the way to a swift victory on land.⁷⁶

Economy of Force

At the operational level, the commander may be required to take great risks to achieve great success—nowhere was this more true than in the opening phases of this war. To achieve mass for overwhelming aerial combat power, the Israelis initially held back only twelve IAF fighters for a secondary objective—the defense of Israeli airspace.⁷⁷ Taking a precaution that the Egyptians had failed to take, they deployed the twelve defending aircraft, during those first vulnerable hours, so that eight were always in the air, while the remaining four were being refueled at the ends of the runway.⁷⁸ To the surprise, and relief of General Hod, these defensive aircraft were never tested, and once the initial air strike was over they were quickly augmented with returning aircraft.⁷⁹

Maneuver

*Maneuver warfare is a warfighting philosophy that seeks to shatter the enemy's cohesion through a series of rapid, violent, and unexpected actions which create a turbulent and rapidly deteriorating situation with which he cannot cope.*⁸⁰

-FMFM 1

To be successful, maneuver warfare must tackle the space-time-forces dilemma. Yet, Joint Pub 1-02 defines maneuver only as a spacial problem; that is, forces maneuver *in space* to “gain a positional advantage.”⁸¹ To maximize the utility of maneuver, we must also maneuver forces *in time* as well; that is, generate a faster operational tempo than the enemy to gain a temporal advantage. It is through maneuver in *both* dimensions that an inferior force can achieve decisive superiority at the required time and place.⁸²

The aim of maneuver warfare is to render the enemy incapable of resisting by shattering his morale and physical cohesion—his ability to fight as an effective, coordinated whole—rather than to destroy him physically through incremental attrition, which is generally more costly and time-consuming.⁸³ To avoid a war of attrition, and shatter Arab morale, the Israelis attempted to concentrate the maximum amount of airpower very, very quickly against the enemy's critical vulnerability. Only by effectively using maneuver warfare in both dimensions, combined with the inherent ubiquity, potency and speed of airpower, were the Israelis able to strike quickly and boldly where, when, and in a manner that would cause the greatest damage to the enemy's ability to fight.

*Battles are won by slaughter and maneuver. The greater the general, the more he contributes in maneuver, the less he demands in slaughter.*⁸⁴

-Winston Churchill

General Hod understood with airpower, unlike surface forces, maneuver *in space* is not sacrificed to achieve mass because of one word—flexibility. Flexibility, considered a tenet of airpower, allowed the Israelis to employ the principle of maneuver by quickly re-targeting to the southwest from the Syrian front when required.⁸⁵ Once General Hod gave the attack order, Israeli aircraft unimpeded by geographic factors that constrain armies and navies, maneuvered swiftly by various routes—some on circuitous routes out over the Mediterranean Sea, others straight across the Sinai—through the third dimension to strike their assigned targets at will.⁸⁶ Once they attained the Egyptian objective, the Israeli leadership quickly re-targeted the IAF to destroy the Syrian, Jordanian and Iraqi Air Forces.⁸⁷ Only after they achieved air superiority, was the IAF allowed to maneuver throughout the entire region in support of the ground commanders.

*Tempo promotes surprise, keeps the enemy off balance. Properly exploited, tempo can confuse and immobilize the defender until the attack becomes unstoppable.*⁸⁸

-FM 100-5

To maneuver in the dimension *of time*, General Hod wisely let operational reality naturally set the tempo of ten minutes over the target area due to fuel and armament constraints.⁸⁹ After ten minutes over the target, the next wave of aircraft would be arriving and the departing aircraft would be out of ammunition with just enough fuel to make it back to the base.⁹⁰

But, General Hod personally honed, to perfection, the tempo in an area critical to maintaining

the operational *blitzkrieg* of airpower he was planning to unleash—a phenomenal ground maintenance turnaround time of eight minutes. General Hod demanded practice and training until the ground crews consistently demonstrated the ability to meet this extraordinary time line. When compared with the Egyptian standard of more than two hours, the true value of this high tempo is revealed.⁹¹ While the Egyptians reckoned on two sorties a day per IAF aircraft—many of the Israeli pilots flew eight, a few even more on the first day of the war. The disparity in these figures speaks for itself and in it undoubtedly lies a major cause of Israel's victory.⁹² In his resignation speech of 9 June 1967, President Nasser declared: "It can be said without fear of exaggeration that the enemy was operating an air force three times its normal strength."⁹³

Finally, to overcome another weakness of airpower—it's transitory nature—the Israelis maintained an initial sustained tempo at the decisive points by choosing eight waves to bear down on the Egyptian airfields. This operational sequencing optimized all the IAF resources to the maximum extent.⁹⁴ As the first wave left the target, the second approached it, the third was en route, the fourth getting airborne, and the fifth waiting to take off (see appendix E).⁹⁵

Clearly unable to maintain this phenomenal pace indefinitely, the IAF took an operational maneuver pause after three hours and established a lower tempo by revisiting, before dusk, most of the twenty-three Arab bases attacked earlier in the day.⁹⁶ Using flares, the Israelis continued the offensive air strikes throughout the first night to further hamper Egyptian runway repairs.⁹⁷

Unity of command

The Israeli chain of command was streamlined. Dayan, the Minister of Defense was the political figure who delegated control to Rabin, the Chief of Staff.⁹⁸ Rabin had placed the air operation into the capable hands of Brigadier General Mordechai Hod who had taken command of the most effective air force in the world from his predecessor, Brigadier General Ezer Weizmann (who was the current Deputy for Operations).⁹⁹ It was General Weizmann who shaped the tools and trained the men, but only General Hod, with centralized control, had the authority to direct the theater airpower.¹⁰⁰ Intent on paralyzing (psychological) and then crushing (physical) the Arab alliance, General Hod was determined to turn an IAF weakness, inferiority in numbers, into a

source of tremendous emotional energy to power every kind of success and achievement.

Undaunted by the responsibility to save a nation, it was he that successfully decided when and how to attack, when it was time to shift the IAF to the other Arab air forces, and finally when to support the ground commanders. Because of this, all airpower efforts were directed and coordinated toward a common goal—despite probing attacks from the secondary eastern theater of operations. Only via quality leadership, employing a centralized command and control system, could the multiple capabilities of IAF airpower be effectively fused and focused to achieve the critical psychological and physical operational objectives necessary for a quick, decisive victory.

Simplicity

[The] 'secret weapon' of the Israeli Air Force is simplicity.¹⁰¹

-Brigadier General Mordecai Hod

It may appear that General Hod, the creator of the air operation, was a genius, but ironically simplicity was his favorite word—the key to his system.¹⁰² General Hod divided his air operation into three simple serial phases.¹⁰³ He made the first and most important phase, establishing air superiority, very elementary—destroy aircraft and runways.¹⁰⁴ Each aircraft had a specific mission to destroy a specific target.¹⁰⁵ The pilots' orders were simple: destroy the Egyptian bombers and interceptors, then devastate the air bases—all within a 10-minute period.¹⁰⁶ Unfortunately, the operational reality of pulling off the first strike was very complex, and General Hod knew it. To reduce the chance for error, General Hod demanded that the IAF practice for years against simulated airfields in the Negev desert until the complex operation became routine.¹⁰⁷

In addition, sophisticated equipment systems—so called 'black boxes'—were held to an absolute minimum.¹⁰⁸ General Hod believed modern airpower had become oversophisticated, producing so much gadgetry that too little time was left for ongoing schooling and practice in the fundamentals.¹⁰⁹ The average age of his pilots was twenty-two and they had begun training in jets at eighteen, as high school graduates.¹¹⁰ To insure his young pilots' shooting was more precise (something critical to the success of the air operation), a simple aiming instrument was devised to keep the target in the sights longer.¹¹¹ The IAF substituted this instrument for the complicated French-made electronic gun sight that testing proved did not work.¹¹² General Hod's simple

aiming device was so good that, coupled with the skill of the IAF pilots, 94% of the total Egyptian aircraft destroyed in the war occurred from 30-mm ground strafing runs.¹¹³

Security

The security of the IAF was incredible, and composed of two stages: prewar tranquility and post-attack silence. Prewar, life appeared peaceful. The day before hostilities, newspaper offices throughout the world received pictures of Israeli troops on leave relaxing at the beaches.¹¹⁴ On 5 June 1967 at 7:10 A.M. Israeli time, when several IAF air bases begun to stir with aircraft taking off, the IAF flight paths were such that farmers only a mile or so away missed their departure.¹¹⁵

Post-attack security was based on intelligence to exploit the Arab tendency to camouflage unpleasant facts in fantasy.¹¹⁶ Thus, anticipating enemy victory claims and wishing to prevent any Arab political or military advantage, Dayan ordered a blackout of war bulletins during the first day of the war.¹¹⁷ When the Egyptians claimed destruction of the Israeli armed forces, the Russians stalled U.N. moves for a cease-fire.¹¹⁸ By the time the Soviets discovered what actually had happened, too much time had elapsed to salvage Egyptian fortunes, and it was too late for the Arab nations to retrieve their fatal blunder of entering the war.¹¹⁹ Clearly, security served to paralyze world intervention just long enough for Israel to achieve their desired end-state.

Surprise

*[Without surprise,] superiority at the decisive point is hardly conceivable.*¹²⁰
-Carl von Clausewitz

Perhaps most important of all, the additive effect of the preceding eight principles was underscored by the element of surprise. Specifically, surprise genuinely multiplied Israeli strength due to its psychological effect. Surprise decisively affected the outcome of combat far beyond the physical means at hand by paralyzing the enemy's ability to resist. By studying their enemy, Israel could appreciate his perceptions. Employing deception they shaped Egyptian expectations, then dislocated the enemy by striking at an unexpected time and place.¹²¹ The key to Israel's ability to achieve surprise thus rested on their ability to appreciate and then dislocate Egyptian expectations by wisely exploiting political disinformation, operational deception and timing.

Politically, Dayan on 3 June 1967 successfully used disinformation at his first press conference

as Defense Minister to veil the government's intention in a shrewdly ambiguous comment:

At the moment, we are more or less in a position of being a bit too late and a bit too early: too late to react with force to the closing of the Strait of Tiran, and too early to come to any final conclusions about the diplomatic efforts applied to this matter.¹²²

In the Arab countries they interpreted the remark to mean that Israel was unprepared for war.¹²³ In Tel Aviv, Ambassador Chuvakhin cabled Moscow that Israel would not start anything for at least two weeks.¹²⁴ Foreign correspondents were fooled and began returning to their various countries believing the crisis had passed.¹²⁵ On 4 June 1967, to continue the illusion of normalcy, the Israeli Cabinet purposely transacted a little ordinary business for public notice.¹²⁶

*Speed is the essence of war. Take advantage of the enemy's unpreparedness; travel by unexpected routes and strike him where he has taken no precautions.*¹²⁷
-Sun Tzu

The Israelis understood that surprise based on operational deception could result in a quick decisive victory. It would mean doing the unexpected thing, which in turn normally means doing the more difficult thing in hopes that the enemy will not expect it.¹²⁸ In fact, this is the genesis of maneuver—to circumvent the enemy's strength, to strike him where he is not prepared.¹²⁹ To create the necessary illusion, operationally since 1963 the IAF would fly early morning mass sorties out over the Mediterranean, drop down low, and turn to the east to return to base.¹³⁰ This routine became known to the Egyptians who treated it like the rising of the sun.¹³¹ However, on 5 June 1967, instead of turning back to the east, the IAF successfully used operational deception to turn south and swiftly bomb eleven Egyptian airfields at precisely the identical moment.¹³² This successful feat of operational deception, and timing, maximized the amount of aircraft destroyed on the ground and reduced the number of aircraft getting airborne to disrupt the air operation.

Surprise can be in timing. Because the air strike was critical to the success of the entire campaign, the Israeli politicians professed the exact time to break the enemy's stranglehold should be determined according to military necessities alone.¹³³ To achieve surprise at the operational level, the Israeli military leadership, using near-perfect intelligence, believed they would succeed if they attacked precisely at 7:45 A.M. Israeli time for many important reasons.¹³⁴ First, since attacks are frequently made at dawn, the Egyptian Air Force's morning state of alert was past its peak by

7:45 A.M. Israeli time.¹³⁵ MiG-21s were no longer waiting at the ends of the runways on 5-minute alert, and the airborne dawn patrols had returned to base.¹³⁶ When no attack had materialized within two or three hours after dawn, the Egyptian Air Force lowered its guard.¹³⁷ Second, Egyptian military officers arrive at their offices at 9:00 A.M. Cairo time (8:00 A.M. Israeli time) which meant many high-ranking Egyptian officers and operational commanders would be caught on the way to their offices and other activities.¹³⁸ And third, there is a morning mist or haze over much of the Nile, the Delta, and the Suez Canal that disperses by 7:30 A.M. Israeli time and by 8:00 A.M. the weather is usually at its best.¹³⁹

How well did the IAF do at shaping Egyptian expectations? First, General Amer, the Egyptian Commander-in-Chief, had chosen to takeoff on 5 June 1967 at 7:15 A.M. Israeli time to fly over the Sinai and review his troops.¹⁴⁰ Because of his morning flight, the antiaircraft crews were directed not to fire at any aircraft.¹⁴¹ This order resulted in them being caught away from their positions during the initial attacks.¹⁴² Second, the only combat aircraft airborne at the time of the original attack were four unarmed training aircraft composed of one instructor and three students. They were all shot down.¹⁴³ Clearly, by dislocating Egyptian expectations, the IAF achieved what Clausewitz believed was nearly impossible—surprise at the operational level.¹⁴⁴

IV. Conclusions


Being vastly outnumbered, outequipped and surrounded, how did the IAF manage to achieve such an absolute military success in the phenomenally short time of two days? There were three cardinal reasons: first, the Israelis expertly wove the principles of war into every facet of their *sound plan*; second, they had *quality leadership* in General Hod who created, tailored and directed the plan until they won the war; finally, they had a well trained, properly armed and dedicated air force capable of the *expert implementation* required for the tasks asked of them.

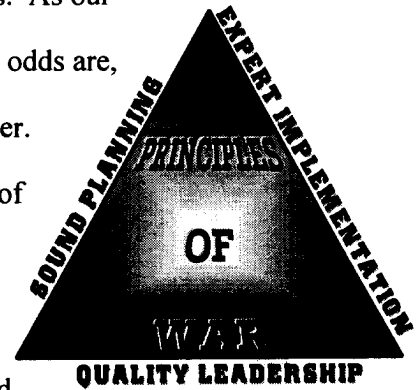
With the high stakes of national survival on the table, Israel could ill-afford any mistakes. The IAF did not make any. Once again, David had found ‘the leverage’ to prevail against Goliath—only this time, the slingshot was the wings of the IAF, the stone—bombs and 30-mm.

V. Lessons for Our Future Force Employment: A 'Trinity of Truths'

*Be audacious and cunning in your plans, firm and persevering in their execution, determined to find a glorious end.*¹⁴⁵

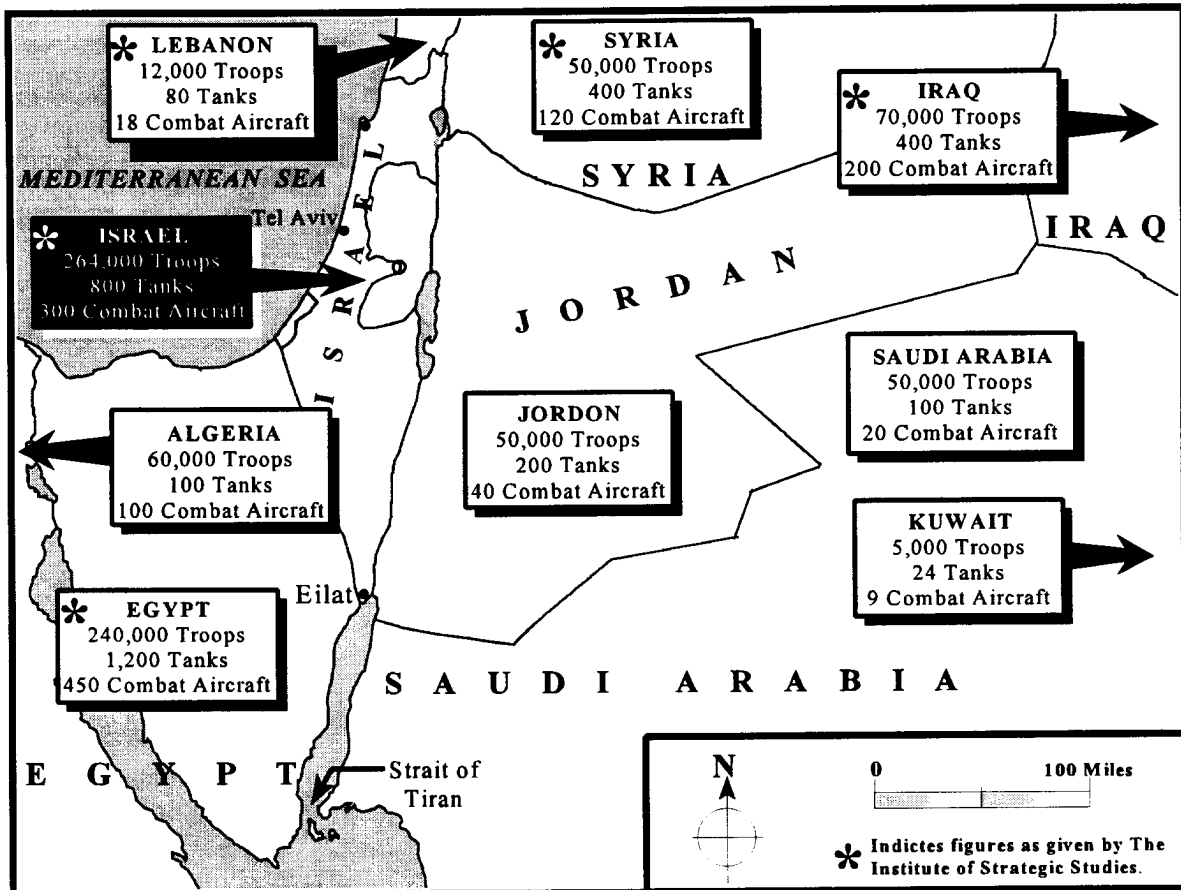
-Carl von Clausewitz

Despite the unique situation of the 1967 Arab-Israeli War, the application of these same axioms transcends the bounds of time and circumstances. As our nation awaits the results of the Quadrennial Defense Review, the odds are, due to budget constraints, our future force structure will be smaller. The lesson for our dwindling forces today, is this golden 'trinity of truths,' revealed to us by the spilt blood of the IAF, must exist in balance—must be grounded in the principles of war. For only when this trinity is in concert, does an outgunned, outmanned and surrounded force have any chance of producing the leverage necessary to achieve victory at the operational level. Logic clearly dictates the best 'two-out-of-three' rule does not work. If any one of these three 'truths' is missing—even out of tune—operational success leading to strategic victory will be fleeting. In any 'two-out-of-three' case, the *best* we can expect from an underdog predicament is random *tactical* success on the battlefield. Unfortunately, due to a flawed foundation, these triumphs will not translate into a victorious end state—despite valiant efforts. Only when all three 'truths' are sewn together in harmony, with an enduring 'principles of war' thread, does a small force possess the capacity to produce synergistic operational results magnified well beyond its expected capabilities. Just as David, in Biblical times, found the leverage necessary to defeat Goliath with a good plan, willingness to lead, and perfect execution of his slingshot's throw, any future Philistine force facing us can also be defeated efficiently and effectively at the operational level—if we only remember to unlock the principles of war with this golden 'trinity of truths'—sound planning, quality leadership and expert implementation. 



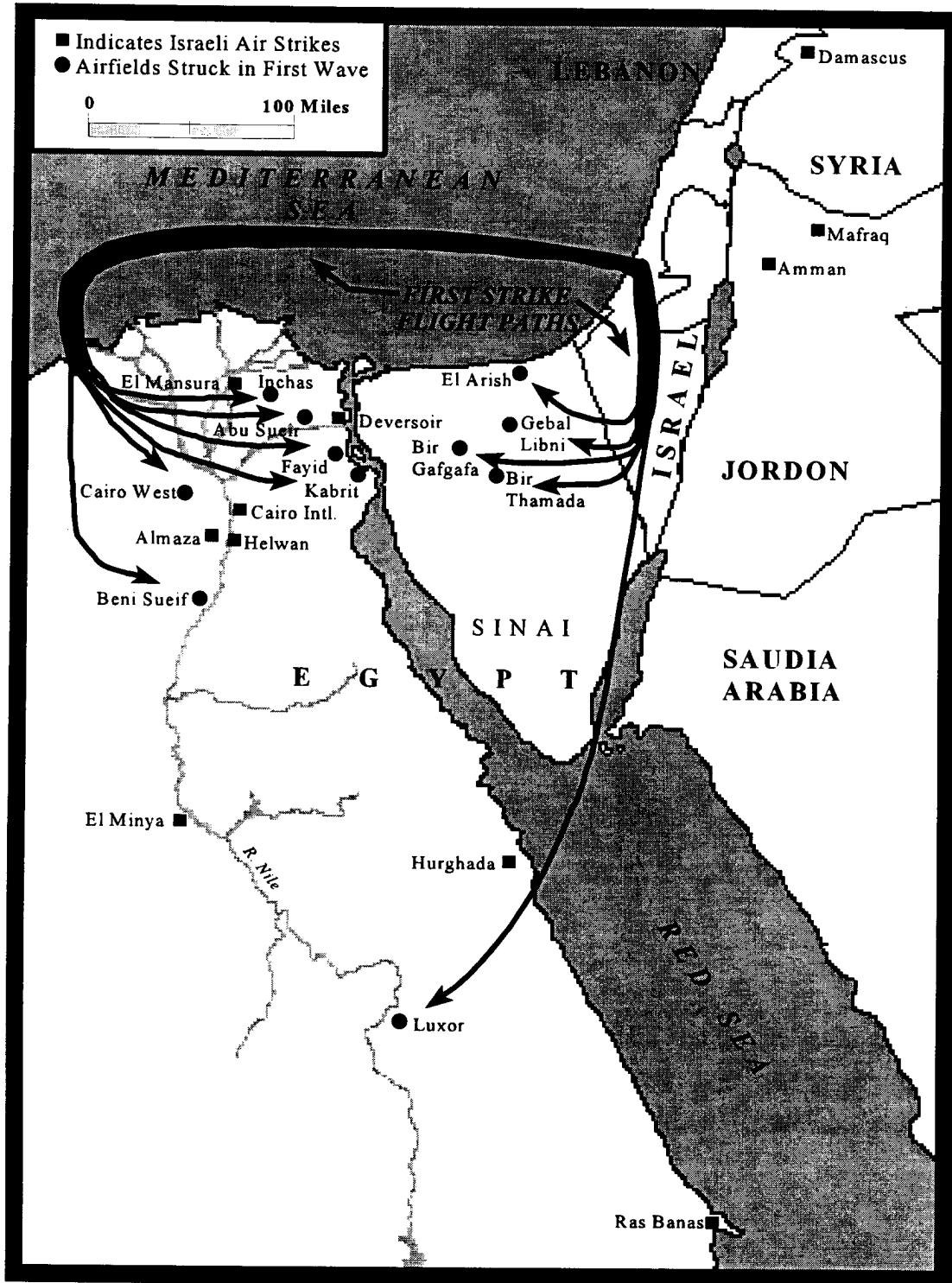
Appendix A

Middle East Relative Strengths¹⁴⁶



Appendix B

Map of Airfields Attacked by Israel¹⁴⁷



Appendix C

Arab Aircraft Lost¹⁴⁸ (By the end of the second day (6 June))

EGYPT:	
	<i>Fighters</i>
MiG-21s	95
MiG-19s	20
MiG-15s/17s	82
Su-7s	10
	<i>Bombers</i>
Il-28s	27
Tu-16s	30
	<i>Transports</i>
Il-14s	24
An-12s	8
	<i>Helicopters</i>
Mi-4 Helos	1
Mi-6 Helos	8
Other Helos	4
	Total 309
SYRIA:	
	<i>Fighters</i>
MiG-21s	32
MiG-15s/17s	23
	<i>Bombers</i>
Il-28s	2
	<i>Helicopters</i>
Mi-4 Helos	3
	Total 60
JORDAN:	
Hunters	21
Transports	6
Helicopters	2
	Total 29
IRAQ:	
	<i>Fighters</i>
MiG-21s	9
Hunters	5
	<i>Bombers</i>
Tu-16s	1
Transports	2
	Total 17
LEBANON:	
	<i>Fighters</i>
Hunters	1
	Total 1
GRAND TOTAL	
	416

Appendix D

The Principles of War¹⁴⁹

The purpose of the principles of war is that they are useful guidelines during the planning and conduct of the war. If used properly, they can provide a better understanding of warfare, but they are not a series of checklist items that lead to victory. The principles of war represent generally accepted major truths that have been proved successful in the art and science of conducting war. Warfighting is an extremely complex activity involving differing circumstances and uncertainties. As a result, the relative importance among the warfighting principles will vary with the situation.

Principles of war have taken many forms and have been treated differently by various military communities. Some military scholars and philosophers would urge that the principles of war should be abandoned, while others would enshrine the principles of war as a road map to success in warfare. Neither view is entirely appropriate. The first view would ignore the educational and guiding influence of the principles of war, while the second view would tend to abuse the principles of war as some sort of recipe that supplants initiative and improvisation. All the principles of war are interrelated and interacting elements of warfare. They are not separate and distinct entities from which a commander selectively chooses and applies to employing forces. Put in perspective, the principles of war help provide a better understanding of warfare, but they are not a series of checklist items that necessarily lead to victory. The principles of war are an important element of the art and science of warfare, but the understanding and mastery of this art requires a depth of knowledge far beyond mere principles.

Some of the advantages of the principles of war are: they provide general guidance/starting points for doctrine, reduce risk of possible failure in military actions, generally tried and proven throughout history, applicable to basic, operational and tactical-level doctrine.

Some of the limitations of the principles of war are: they are situational/will not apply in all cases, could encourage a 'checklist' mentality due to the uncertainty of conducting war, not all military thinkers agree on the selection of the individual principles (they vary between nations and

Appendix D (continued)

military services, their applications varies from situation to situation, application varies due to scope of operation, application varies across the spectrum of conflict).

Because of the various principles used in sources, below is a list and definition of the principles used in this particular operational art evaluation.

OBJECTIVE	Direct military operations toward a defined and attainable objective that contributes to strategic, operational or tactical aims.
OFFENSIVE	Act rather than react and dictate the time, place, purpose, scope, intensity and pace of operations. The initiative must be seized, retained and fully exploited.
MASS	Concentrate combat power at the decisive place and time.
ECONOMY OF FORCE	Create usable mass by using minimum combat power on secondary objectives. Make the fullest use of all forces available. Place the enemy in a position of disadvantage through the flexible application of combat power.
MANEUVER	Using the dimensions of time and space place the enemy in a position of disadvantage through the flexible application of combat power.
UNITY OF COMMAND	Ensure unity of effort for every objective under one responsible commander.
SIMPLICITY	Avoid unnecessary complexity in preparing, planning and conducting military operations.
SECURITY	Never permit the enemy to acquire an unexpected advantage.
SURPRISE	Strike the enemy at a time or place or in a manner for which he is unprepared.

Appendix E

The Israeli Initial Air Operation Time Table¹⁵⁰

To achieve the minor miracle of mass and maneuver, the Israelis were operating at an incredibly fast ground turnaround time. To clearly show the exact timing and high operational tempo required to pull off the amazing eight wave attacks, the following approximate times are shown. As can be seen, there is little time for mistakes. It was with this kind of maneuver in the dimension of time that the Israelis were able to insure that the same aircraft was over the same target within almost an hour from its last attack.

Time en route to target	23 minutes
Time over target	10 minutes
Time to return to base	20 minutes
Ground turnaround time	8 minutes
Total time	61 minutes

Notes

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2. Howard M. Sachar, *A History of Israel: From the Rise of Zionism to Our Time* (New York: Alfred A. Knopf, 1985), 620.
3. Ibid.
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5. Abba Eban, *Personal Witness: Israel Through My Eyes* (New York: Putnam, 1992), 352.
6. Ibid.
7. Eban, 352-353.
8. Sachar, 622.
9. Eban, 353.
10. Heather Bleaney and Richard Lawless, *The Middle East Since 1945* (London: B.T. Batsford, 1990), 22.
11. Eban, 357; Heather Bleaney and Richard Lawless, *The First Day of the Six Day War* (London: Dryad Press, 1990), 3.
12. Richard Worth, *Israel and the Arab States* (New York: Franklin Watts, 1983), 43.
13. Eban, 357-357.
14. Ibid., 366.
15. Sachar, 626.
16. Eban, 369.
17. Worth, 44.
18. J.N. Westwood, *The History of the Middle East Wars* (New York: Exeter Books, 1984), 83.
19. Eban, 401; Sachar, 633.
20. Sachar, 633.
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23. Sachar, 625-626.
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25. Bleaney and Lawless, *Middle East Since 1945*, 23.
26. Sachar, 633.
27. Heather Bleaney and Richard Lawless, *The Arab-Israeli Conflict 1947-1967* (London: B.T. Batsford, 1990), 21.
28. Ibid.
29. Sachar, 635.
30. Ibid.

31. Ibid.
32. Bleaney and Lawless, *Arab-Israeli Conflict*, 22.
33. Y. Bar-Simon-Tov, *Israel, the Superpowers, and the War in the Middle East* (New York: Praeger, 1987), 130.
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35. Sachar, 639.
36. Bleaney and Lawless, *First Day of the Six Day War*, 3.
37. Ibid.
38. W.J. Kotsch, "The Six-Day War of 1967," *United States Naval Institute Proceedings*, June 1968, 74.
39. Bleaney and Lawless, *Arab-Israeli Conflict*, 3.
40. Ibid., 4.
41. Ibid.
42. Ibid., 6.
43. Sachar, 640.
44. Peter Young, *The Israeli Campaign 1967* (London: William Kimber, 1967), 85.
45. Sachar, 640.
46. Bleaney and Lawless, *Arab-Israeli Conflict*, 6; Kotsch, 76.
47. Edgar O'Ballance, *The Third Arab-Israeli War* (London: Faber & Faber, 1972), 71.
48. Sachar, 640.
49. Ibid.
50. Young, 86.
51. Bleaney and Lawless, *Arab-Israeli Conflict*, 20.
52. Ibid.
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55. Bleaney and Lawless, *Arab-Israeli Conflict*, 7.
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57. Ibid.
58. John I. Alger, *The Quest For Victory* (London: Greenwood Press, 1982), 34.
59. Sir William Slim, *Defeat into Victory* (London: Cassel and Co. Ltd., 1956), 550-551.
60. Yehoshafat Harkabi, *Israel's Fateful Hour* (New York: Harper & Row, 1988), 43.
61. S.L.A. Marshall, *Swift Sword: The Historical Record of Israel's Victory, June, 1967* (New York: American Heritage, 1967), 33.

62. O'Ballance, 54.
63. Kotsch, 81.
64. Ibid., 73.
65. Ibid., 75.
66. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret, (Princeton NJ: Princeton University Press, 1984), 92.
67. Kotsch, 75.
68. Marshall, 26-27.
69. Ibid.
70. Alan L. Gropman, "The Battle of Britain and the Principles of War," *Aerospace Historian*, September 1971, 138; Clausewitz, 258, 595-596, 618-619.
71. Gropman, 138; Clausewitz, 258, 595-596, 618-619.
72. Marshall, 23.
73. Sachar, 636.
74. U.S. Department of the Navy, FMFM 1: *Warfighting* (Washington, D.C.: GPO, March 1989), 61.
75. Kotsch, 75.
76. O'Ballance, 74.
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78. Ibid.
79. Marshall, 27.
80. U.S. Navy, FMFM 1: *Warfighting*, 59.
81. The Joint Chiefs of Staff, Joint Pub 1-02: *Department of Defense Dictionary of Military and Associated Terms* (Washington, D.C.: GPO, 23 March 1994), 250. The JCS Pub 1-02 defines maneuver as: " . . . 4. Employment of forces on the battlefield through movement in combination with fire, or fire potential, to achieve a *position of advantage* [my emphasis] in respect to the enemy in order to accomplish the mission."
82. U.S. Navy, FMFM 1: *Warfighting*, 58.
83. Ibid., 59.
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86. Kotsch, 75.
87. Randolph Churchill and Winston Churchill, *The Six Day War* (Boston: Houghton Mifflin, 1967), 86.
88. U.S. Department of the Army, FM 100-5: *Operations* (Washington, D.C.: GPO, June 1993), 7-3.
89. Trever N. Dupuy, *Elusive Victory: The Arab-Israeli Wars, 1947-1974* (New York: Harper & Row, 1978), 246.
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108. Marshall, 28.
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110. Ibid.
111. Ibid.
112. Ibid.
113. Bleaney and Lawless, *Arab-Israeli Conflict*, 4.
114. Churchill and Churchill, 74.
115. Marshall, 23.
116. Sachar, 636.
117. Ibid.
118. Ibid.
119. Ibid.
120. Clausewitz, 198.
121. U.S. Navy, FMFM 1: *Warfighting*, 61.

122. Sachar, 638.
123. Ibid.
124. Ibid.
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126. Eban, 407.
127. Sun Tzu, *The Art of War*, trans. S.B. Griffith (New York: Oxford University Press, 1982), 134.
128. U.S. Navy, FMFM 1: *Warfighting*, 33.
129. Ibid.
130. Dupuy, 245.
131. Ibid.
132. Ibid.
133. Eban, 407.
134. Kotsch, 81.
135. Ibid.
136. Ibid.
137. Ibid.
138. Ibid.
139. Ibid.
140. Bleaney and Lawless, *Arab-Israeli Conflict*, 3.
141. Ibid.
142. Sachar, 640.
143. Bleaney and Lawless, *Arab-Israeli Conflict*, 3.
144. See page 198 of *On War*, where Clausewitz, who was only familiar with the capability and limitations of ground forces, states "surprise is a tactical device, simply because in tactics time and space are limited in scale." But, with the advent of airpower, surprise can be achieved at the operational level, as the Israelis clearly demonstrated in this war.
145. Clausewitz, 259.
146. Bleaney and Lawless, *Arab-Israeli Conflict*, 4.
147. Bleaney and Lawless, *Arab-Israeli Conflict*, 5; Mordechai Bar-On, ed., *Israeli Defence Forces: The Six Day War* (New York: Israel Ministry of Defence and Chilton Book Company, 1968), 13.
148. Churchill and Churchill, 87.
149. U.S. Department of the Air Force, *Air Force Manual 1-1*, vol. 2, *Basic Aerospace Doctrine of the United States Air Force* (Washington, D.C.: GPO, March 1992), 9-14; Donn A. Starry, "Principles of War," *Military Review*, September 1981, 7-10; Clausewitz, 190-221; Russel F. Weigley, *The American Way of War: A History of United States Military Strategy and Policy* (New York: Macmillan, 1973), 210-215.
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